ART. XI.—*Mémoires de la Société Médicale d'Observation de Paris.* Tome deuxiéme. Paris, 1844.

Memoirs of the Medical Society of Observation of Paris. Second volume. Paris, 1844. pp. 596.

MORE than six years have elapsed since the publication of the first volume of these Memoirs; but we must not, therefore, conclude, we are told by the writer of the preface of the present volume, M. Valleix, that the labours of the society have been either discontinued or remitted. The great object of the society, from the time of its foundation, about twelve years since, has been the gradual accumulation of material of undoubted value, which should first be subjected to a rigid scrutiny, and afterwards analysed with the view of obtaining general results, which could be made known to the profession in the form of memoirs, such as those contained in the volume before us, and for the preparation of which much time is required. In collecting and comparing facts, the assistance of numbers is invoked, and a considerable part of the preface is occupied in the refutation of some of the objections which have been made against the employment of numerical analysis. The best proof of its value is to be found in the many valuable results to which it has led, and in the fact that it is steadily gaining ground in the estimation of medical men, as evinced by the much more frequent appeal to numerical statements, with the view of attaining to positive conclusions. But it is not merely in the employment of numbers as an assistant in analysis that the Society of Observation has found opponents. It has been said that we have already histories of cases in abundance; and in reference to a certain kind of histories, this is certainly true. The society, however, demands that the cases presented to it should be detailed and accurate, and where deficiencies are observed, they are rigidly criticised; its members are constantly reminded of the necessity of the most scrupulous accuracy in the investigation of every point, and until the cases reported by them evince a sufficient evidence of the proper requisites, they are not admitted into its archives. The society is of the mind that the observing and reporting of cases, as well as their analysis, is a work which demands not only certain mental requisites, but a long practical training for its proper accomplishment. Like the experiments of the natural philosopher, or the complicated analysis of the chemist, it demands for its performance a familiar acquaintance with the objects upon which it is employed, in order to inspire that degree of confidence, which is necessary before we can employ the data afforded, as the basis of scientific reasoning. Of such data the society thinks that there is a great deficiency, which it is of the last importance to supply; and in this respect, also, the correctness of its views is daily becoming more and more apparent, the silent acknowledgment of it being found in the fact, that everywhere there is a tendency to approach the standard which the society has erected. Every one, says M. Valleix, feels, in spite of himself, that more attention and accuracy must be brought to bear upon the study of cases. The society, therefore, finds no reason to relax its efforts; but, on the contrary, every inducement to prosecute its object, which is altogether one of utility. Several memoirs are in course of preparation, so that the forthcoming volumes will not be so long deferred. The present volume contains four memoirs, the first of which is by M. Louis, being an account of the yellow fever of Gibraltar of 1828, now first published in the original. A translation by Dr. Shattuck having been already published in this country, and reviewed in this journal, we shall not further allude to it here.

The second is by M. Valleix, and entitled, "*Researches in reference to the frequency of the Pulse in Newborn Infants, and in those aged from seven months to six years.*" Before detailing the result of his own experiments, Dr. V. gives a short account of the general state of the question, and of what has been done by other experimenters. It is generally stated by authors, that the pulse in infancy is very frequent, and that this frequency diminishes as individuals advance in life. The mean frequency in new-born children is usually represented as from one hundred and thirty to one hundred and forty; whilst at the age of one year it is reduced to one hundred and twenty. A few years since Dr. Gorham published in the London Medical Gazette an account of some experiments, by which he found that the mean frequency in the first twenty-four hours after birth was one hundred and twenty-three; from this time to the end of the first week, one hundred and twenty-eight; after which it increased more rapidly, the mean frequency from one to five months, being nearly one hundred and forty-nine, whilst from this period to the end of the second year it fell to one hundred and thirty, after which it went on diminishing. The experiments of our author accord with those of Dr. Gorham in this, that the pulse in very young infants is much less than at the age of six months. But Dr. Valleix estimates the absolute frequency within the first three weeks considerably lower than has been done by Dr. Gorham, viz., at eighty-seven. From the seventh to the twenty-seventh month, he places the mean frequency at one hundred and twenty-six, which is also rather lower than that found by Dr. G. It is to be recollected, however, that in the first series, where the pulse was found to be eighty-seven, the children were asleep, a state which is shown to have a positive influence in diminishing its frequency. Making allowance for this circumstance, our author thinks that the mean frequency of the pulse in very young children should be set down at between ninety and one hundred. The difference between these results, and those of preceding writers, he attributes to the circumstance that the latter have not examined the pulse when the infant was as near as possible in a state of perfect repose, or properly estimated other incidental circumstances capable of influencing the result. Thus he found that the least movement, fretfulness, or other mental emotion, sensibly increased the number of pulsations. An increase of the temperature of the room of a single degree was found uniformly to increase the frequency. Like Dr. Guy, our author found that the pulse was more frequent early in the morning than later; but as the children were all examined after breakfast, he thinks that this result must in a great measure at least be attributed to the influence of the morning meal, the acceleration caused by which would diminish as the morning advanced. None were examined at a later period of the day, so that it is doubtful whether the results before us really confirm those of Dr. Guy or not. The influence of sex was found to be very decided, the pulse in girls being considerably more frequent than in boys.

Having thus noticed some of the principal results obtained by M. Valleix, without, however, entering into detail, or attempting to give the reader any idea of the labour which the minuteness and accuracy of the experiments, and the estimation of the various influences affecting the general result involved, we pass on to the third memoir, by M. Ducrest. This is entitled, "*Researches in reference to a bony production upon the surface of the cranium in women who have died in child-bed.*"

This accidental production consisted of a thin layer, which, in its earlier stage, was analogous to cartilage, and at a later period presented the consistence of bone. It was especially met with on the internal surface of the cranium, at its anterior and superior portion, sometimes in patches, which, at a later period, became continuous, forming more extensive layers. In the more advanced stages, the base of the cranium became the seat of the disease, but was never so extensively covered as the vault. It was found in eighty out of two hundred and thirty cases of women who had died in child-bed, whilst in the crania of seventy-one individuals, under other circumstances, no traces of the lesion were met with. It seems, therefore, sufficiently clear that the pregnant or puerperal state, or the diseases supervening in the course of the latter, are principal elements in its production. The puerperal state alone appears insufficient to account for it, for in several, death took place within a few hours after delivery; and it seems impossible to suppose, as M. Ducrest observes, that broad cartilaginous plates could have been formed, and become encrusted with earthy salts in three hours. The same objection, says M. Ducrest, is in part applicable to the supposition, that it was a consequence of the diseases of which the patients died. Peritoneal inflammation was present in the great majority of cases, and how far the same epidemic constitution may have been concerned in the production of the lesion in question, it seems impossible to determine for want of other data with which to institute a comparison. The presence of this matter in the cranium does not appear to have influenced materially the course of the puerperal disease just mentioned, or to have given rise to any symptoms by which the period of its formation could be determined, or even its existence be presumed. At present it comes before us in the light of a curious fact deserving of attention, but requiring further observation to determine its causes as well as the degree of importance which is to be attached to it. M. Ducrest appears inclined to admit that the state of pregnancy may be a principal cause. To settle this question, a sufficient number of crania of those who may, from various causes, die previous to delivery, should be examined.

The last memoir is by Dr. Fauvel, and entitled, "*Researches in reference to Suffocating Capillary Bronchitis* (*Suffocating Catarrh*) *in both Infants and Adults.*" The term Capillary Bronchitis, says our author, is at present employed to designate one of the diseases formerly confounded under the title of Suffocating Catarrh. After giving a separate consideration to each of the symptoms presented in the cases, twenty-seven in number, upon which the memoir is based, M. Fauvel proceeds to give a general description of the onset and course of the disease. Eight of the cases were children, and the remainder adults.

Save in a single instance, it was preceded for a longer or shorter period, by an ordinary bronchitis, upon which it was engrafted, sometimes suddenly, at others more gradually. Its commencement was marked by excessive dyspnœa, anxiety of countenance, pain under the sternum, and frequency of pulse. Once established, the phenomena of the disease were so characteristic as to give to it a peculiar physiognomy. These phenomena are separately described, according as they were met with in children or in adults.

In children the face was pale, with a violet tinge, especially about the lips; the eyes seemed prominent, the countenance was extremely anxious, and the nostrils much expanded at each inspiration. The respiratory movements were frequent, and the thorax strongly dilated. From time to time the respiration became noisy, stertorous, which stertor disappeared as expectoration came on. This probably took place about the third or fourth day, except in three cases, when it never came on at all; was painful and small in quantity, the matter expectorated being composed of a thick, yellowish-white substance, without air bubbles, and of stringy mucus, sometimes frothy and streaked with blood. The voice was natural, speech short and broken. The older children complained of a lacerating pain under the sternum during the cough, and also of a sense of weight which prevented respiration. The pulse was very frequent; the skin dry, burning, and presenting more or less of the same violet colour as the face; the thirst intense; the intellect undisturbed; the tongue and digestive functions but little altered; the appetite gone, and the bowels mostly constipated. Such is an abstract of the principal features of the first stage, as given by our author, who goes on to say that "the strength of the patient becoming exhausted by the constant muscular effort to overcome the impediments to the entrance of air into the lungs, the respiratory movements became less powerful, and even progressively slower, the cough less vigorous, and the expectoration more difficult. The respiration became more embarrassed, and more uniformly stertorous; the face assumed a dull leaden colour, the violet tinge becoming more marked about the lips, cheeks, and over the whole surface of the body. The conjunctiva became injected, the look fixed and expressive of extreme terror. When the patients were approached they expressed their fear by cries and disordered movements. Those among them who were strong enough to sit up, avoided lying on the back, and assumed the most singular positions, bending themselves forward, lying flat on the belly, or letting the head hang over the bed, and sometimes attempting to get down." The pulse became more frequent and less strong; the heat of skin diminished, its dryness at times giving place to perspiration. The restlessness of the early stage gave place to a steady somnolence, in the midst of which were heard, at short intervals, plaintive groans or harrowing screams. Sometimes a fit of coughing or other circumstance would arouse the patient and bring back the violent efforts of the first stage, but this was of short duration; the somnolence and stertor returned, and so on till death. Auscultation discovered, in the early stage, a fine, dry, subcrepitant râle throughout the whole or a greater part of the chest; a râle of larger size being mixed with the first, opposite the large bronchial tubes. In the second stage the fine sub-crepitant râle was still heard at times during the cough, but in general had given place to a sort of scraping (*raclement*) or dry mucous râle, or lastly, different sorts of sonorous râle. The percussion throughout was normal, or clearer than natural.

Such are the principal phenomena of the disease as it presented itself amongst children. In adults they were strikingly similar.

Of the children, seven out of eight died, the duration of the disease in the first being between five and eight days. The duration was about the same amongst the adults who died, but the number of deaths amongst them was much smaller, being ten only out of nineteen. In those who recovered the duration was from eleven to twenty days.

Upon post-mortem examination it was found that, in every case, the air passages contained a muco-purulent matter, thick and adherent, which filled up almost all the bronchia, from their second division to their capillary extremities. Besides, there was found, in four instances amongst the children, a false membrane lining a part of the bronchial tubes, along with the purulent matter above mentioned, and gradually blending itself with it.

In all cases also, there was a uniform dilatation of the bronchial tubes, either general or partial. The mucous membrane was always red, and presented a rough appearance, characters which were most marked in the large bronchial tubes.

The pulmonary tissue was generally pale and bloodless, whilst the ramifications of the pulmonary artery were found gorged with blood.

Pulmonary emphysema, occupying especially the upper lobe and border of the lungs, was always met with, as well as a gaseous distension of the organs to such an extent that they no longer collapsed, but continued to fill the thoracic cavity after it had been opened.

In nine cases, six of whom were children, there were small purulent granulations scattered through the lungs. In the same number also there were little masses of lobular pneumonia. The bronchial glands were swelled, red, and friable, in all the children except one, and in two of the adults; but in most of the latter their condition was not recorded.

The other organs of the body, the brain and abdominal viscera, were characterized by a congested condition, the consequence of the sanguine distension of the right cavities of the heart and the whole venous system.

Our author, having completed his account of the post-mortem appearances, goes on to point out that the inflammation of the small bronchial tubes, is the principal pathological condition to which the other alterations of the respiratory apparatus can be traced. This inflammation was always characterized by the presence of the muco-purulent matter above described, which obstructed the bronchial tubes, and which, by its retention there, would naturally give rise to the dilatation of these latter. The general gaseous distension of the lungs, as well as the partial dilatation of the vesicles, is accounted for, Dr. F. thinks, on the theory adopted by Laennec in explanation of the latter, with some modifications. Dr. F. supposes that in inspiration the thick matter which distended the bronchial tubes would be forced towards the periphery, whilst the air which reached the pulmonary vesicles could not be forced out during expiration in opposition to this plastic matter, "so that at each inspiration the air was compressed by the column of liquid which retained it. The same thing took place to a still greater extent during the fits of coughing; for it must not be forgotten that the latter, on account of the narrowness of the glottis, is felt throughout the whole lung. Hence it followed that the pulmonary cells, constantly distended by air, were besides subjected to a force which tended to dilate or rupture them." This gaseous distension of the cells, by the compression which it must exert upon their walls, thus obstructing the capillary circulation, accounts both for the bloodless condition of the proper tissue, as well as the distension of the pulmonary artery, the right side of the heart and the venous system generally. As regards the purulent granulations, our author thinks that they result from the purulent matter being forced, under certain conditions, out of the capillary bronchia, into the pulmonary vesicles, and are not a direct secretion from the latter, as has been supposed by some, whence the name of vesicular pneumonia which has been applied to this lesion. Whether mechanically produced, or arising from inflammation of the cells, these purulent granulations are in either case acknowledged to be the consequence of capillary bronchitis, and liable on the other hand to become surrounded by an engorged or hepatized condition of the pulmonary tissue, constituting lobular pneumonia, a lesion which was never met with in those cases which proved rapidly fatal.

It is hardly necessary to say that the prominent symptoms, as well as the fatal termination, find a ready explanation in the fact of the defective hæmatosis and in the obstruction to the pulmonary circulation.

As regards the causes of the disease, it would seem that it is rarely a primary affection, in the strict sense of the term, having occurred in every case but one, in persons who were already labouring under inflammation of the larger bronchial tubes, which latter may be regarded as a principal predisposing cause. The only occasional cause which could reasonably be supposed to have exerted any influence, was the state of the atmosphere; the disease having been especially met with, in cold and variable seasons. It is probable also that the accumulation of the matter secreted from the larger bronchial tubes, owing principally to deficient expectoration, the consequence of debility, may have contributed in certain cases to the extension of the inflammation to the capillary tubes. Epidemic constitution also appears to exert a decided influence. At the time when the disease was observed at the children's hospital, eruptive fevers were prevailing in the same wards, and a considerable portion of the cases there met with, occurred in the course of, or as a consequence of these affections. In some of these cases, too, and in these only, were false membranes found in the bronchial tubes, a condition which our author is disposed to refer to the special or malignant character of the epidemic influence. A similar epidemic influence was observed during a late prevalence of the disease in the Hôtel-Dieu at Nantes.

We shall pass over the chapters on diagnosis and prognosis, simply observing that the disease was much more fatal when it was connected with eruptive and typhoid fevers &c., than when it followed a simple bronchitis.

Treatment.—The loss of blood appears to have been much less efficacious than free vomiting, which was generally followed, both in children and adults, by decided relief. Ipecacuanha was usually employed.

Tartar emetic in contra-stimulant doses, and persevered in with a view to this effect, was entirely inefficacious. Expectorants were resorted to only in the cases of adults, and here without any evident good effect. Large blisters to the chest, generally on its anterior surface, were often applied in the latter stages of the disease, but apparently without good effect, whilst they were often the source of extreme pain to the patients. Sinapisms to the extremities were frequently repeated in every case. Emollient drinks were prescribed, for which, in the second stage of the disease, among adults, an infusion of polygala was substituted.

Having described the treatment and its results, in the cases observed by him, our author proceeds to indicate the therapeutic measures which he conceives most calculated to fulfil the indications clearly pointed out by a knowledge of the pathology of the disease. In the first stage, the great object is to reduce the inflammation. For this purpose, the loss of blood, when proportioned to the age and strength of the patient, may be demanded, and especially so at the outset; but it must not be forgotten that the effect may be injurious in cases where the constitution is debilitated from other causes. At the same time emetics should always be resorted to, and it is from them, Dr. F. thinks, that the greatest good is to be anticipated. Sinapisms, frictions and dry cups may be simultaneously employed. If notwithstanding these measures the disease goes on to the second stage, or is accompanied from the first, with evidences of prostration; the loss of blood is not to be thought of, notwithstanding the difficulty of breathing, the anxiety, and the violet tinge of the integuments. These symptoms of asphyxia are produced, says our author, by a mechanical obstacle to the passage of the blood through the lungs, and not by pulmonary congestion. By emptying the circulatory system, we do not remove the obstacle, but uselessly diminish the strength of the patient. Several of his cases evince the truth of the remark of Andral, that immediately after the loss of blood under such circumstances, suffocation augments, the rattles become more marked, and extend from the bronchia to the trachea. We must not therefore be imposed upon by the symptoms of asphyxia above mentioned, the cause of which is to be found in the accumulation of the products of secretion in the bronchial tubes. Our great endeavour therefore, should be to facilitate expectoration, with which view vomiting is again placed by our author in the first rank. For this purpose, ipecacuanha alone, in moderate and oft repeated doses, is recommended; free emesis being not so much demanded here, as nausea and slight vomiting from time to time. His high opinion of the efficacy of emetics in this disease, he enforces by an appeal to the authority of Fordyce, Cullen, and other English writers, as well as some of his own countrymen. In children it is especially important to attend to position. The patient should not be allowed to lie on the back, but should be supported in a sitting posture or bent forward, and in every way assisted in the expulsion of the expectoration. As the expiratory efforts become weaker, both in adults and children, it becomes important to stimulate the muscular action by appropriate remedies, such as polygala or gum ammoniac, or if these fail, the preparations of strychnia, as recommended by Stokes.

The remaining indication is to diminish the bronchial secretion, in cases where its extreme abundance is such, as that even a free expectoration is insufficient to disencumber the bronchial tubes. To accomplish this object, the balsamic and resinous preparations, such as tolu and turpentine, would be demanded. When a prompt and energetic effect was called for, the balsam copaiva would, our author thinks, be especially worthy of a trial. Having never seen any good from the use of blisters, but the reverse, he is disposed to discard them in the treatment of this affection, especially in the cases of children, where they are sometimes the cause of serious difficulty.

The diet should not be too rigid, but on the contrary when the disease has lasted more than five or six days, or from the very commencement, in the case of children, or of adults who have been much debilitated, it will be proper to support the strength by milk, broth, &c.

Appended to the above memoir are detailed histories of some of the cases upon which it is based, and abstracts of the remainder, which conclude the present volume. T. S.

ART. XII.—1. *Eleventh Annual Report of the Trustees* (*and the Superintendent*) *of the State Lunatic Hospital, at Worcester,* (*Mass.*) December 1843, pp. 109.

2. *Annual Report of the Board of Trustees of the Massachusetts General Hospital* (*and of the Superintendent of the McLean Asylum for the Insane*) *for the year* 1843, pp. 64.

3. *State of the New York Hospital and Bloomingdale Asylum, for the year* 1843, pp. 28.

4. *The Annual Report of the Physician and Superintendent of the Eastern Asylum, in the city of Williamsburg, Virginia, for* 1843, pp. 44.

5. *Annual Report of the Managers of the Lunatic Asylum* (*Kentucky*) *for* 1843.